To the Editor:

Solt et al.[1] raise the possibility that seasonal factors may have an impact on symptom severity among Veteran Administration (VA) patients diagnosed with posttraumatic stress disorder (PTSD). Using VA hospital records from October 1, 1988 to October 1, 1991, the authors found that inpatient psychiatric admissions attributed to an exacerbation of PTSD symptoms were significantly more frequent in the spring and summer. Although the authors acknowledged the possible role of sociocultural and environmental factors, they emphasized the possible causal role of serotonin underlying such seasonal variation.

While the serotonin hypothesis is informative, inclusion of the period covering autumn 1990 through autumn 1991 raises a potential confound that clouds the interpretation of their findings. From the autumn of 1990 through the summer of 1991, there was extensive media coverage pertaining to invasion of Kuwait, including the deployment of American soldiers, projections regarding a high number of casualties and deaths, use of chemical weapons, live footage of the war, interviews with families separated from loved ones, images of Israeli citizens wearing gas masks, and soldiers' homecoming experiences. Among the apparent effects of these events and their widespread depiction was an increase in reexperiencing, numbing, and arousal symptoms among Vietnam veterans diagnosed with PTSD.[2] Locally, at the National Center for Post Traumatic Stress Disorder in Boston, a center that specializes in comprehensive diagnostic assessment of PTSD, outpatient and inpatient referrals doubled in the winter and spring of 1990 and rose even higher in the summer of 1991. Although our patient sample may differ substantially from that studied by Solt et al., these service utilization patterns reinforce our concern that 1991 was an atypical year for US veterans and may skew admission patterns. Given the brief nature of Solt et al.'s report, the authors did not have an opportunity to detail any differences in admission rates across the three years of their data collection. Without this information, the findings are suspect.

More broadly, there is a need to consider a wide range of seasonal cues that serve as trauma reminders and may influence admission patterns. As the authors note, seasonal factors, like anniversaries, may confound their findings. In addition to anniversaries, we have observed that among Vietnam veterans seasonal changes in weather (i.e., heat, extreme rain), holidays (Veterans Day, Independence Day, Christmas), and contemporary cultural events (e.g., wars, news items) appear to influence PTSD symptom presentation. Thorough attention to the breadth of seasonal reminders would strengthen future work related to variations in neurobiological factors like serotonin.

Finally, despite the fact that patient charts and electronic records were thoroughly reviewed, it is unclear to what degree the sample met the strict DSM criteria for PTSD. We strongly recommend that future work use empirically validated measures to assess PTSD diagnostic status and severity. Ultimately, what is needed for scientifically sound investigation of the serotonin hypothesis are procedures which directly measure both PTSD symptoms and related biological functioning, while simultaneously controlling for confounds. Sincerely,

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REFERENCES

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2. Long N, Chamberlain K, Vincent C. Effect of the Gulf War on reactivation of adverse combat-related memories in Vietnam veterans. J Clin Psychol. 1994;50:138-144.